Science Education

Introduction

The B.S. in Science Education program at UW-Stout prepares students for a career in teaching science at the middle school and secondary levels. To complete the program, students are required to take general education courses, science courses, professional education courses, and several field experiences.

Students choose a science teaching major certification in broadfield science, biology, chemistry, or physics and a science teaching minor certification in biology, chemistry, or physics. The science teaching major certifications require 28 credits of science, and the science teaching minor certifications require 18 credits of science. These courses include required and elective science courses to provide students with flexibility in pursuing a wide variety of courses in each science discipline.

The broadfield science major certification includes courses in biology, chemistry, physics, and earth science. It certifies teachers to teach any science course from grades five through ten. To teach eleventh and twelfth grade courses in biology, chemistry, or physics, science teachers must be certified in those specific subject areas with either a major or minor certification. The broadfield science major certification is recommended for those teachers most interested in teaching at the middle school level. It can also be advantageous at very small high schools where science teachers teach many different science courses.

Science teaching is a highly rewarding career that is also a high demand profession. For a successful career in science teaching, you should have an aptitude for helping others and a love of science. According to the National Education Association (*NEA*) and Wisconsin Department of Public Instruction (*DPI*), there is currently a national and state wide shortage of science teachers. Completing a BS in Science Education degree at UW-Stout will lead to a rewarding career and valuable contribution to individuals and society.

General Requirements
Bachelor of Science Degree

Total for graduation	120-130 credits
General Education	41 credits
Major Studies	79-89 credits

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: **www.uwstout.edu/soe/students/requirements-benchI.shtml**.

- Pass the Pre-Professional Skills Test (*PPST*)
- Attain a 2.75 cumulative grade point average
- Pass the required teacher background check
- Earn a grade of at least 2.00 (*C*) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- Earn a minimum grade of 2.00 (*C*) in SPCOM-100 Fundamentals of Speech.
- Earn a minimum grade of 2.00 (*C*) in STMED-160 Introduction to Technology and Science Education
- Complete EDUC-326 Foundations of Education
- Complete General Education Technology requirement
- Satisfactory rating on Benchmark I Portfolio Assessment rubric
- Satisfactory rating on Benchmark I Student Interview

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: **www.uwstout.edu/soe/students/requirements-benchI.shtml**.

- Complete Application for Student Teaching form
- Maintain a 2.75 grade point average
- Pass Content Knowledge Exam (*Praxis II*)
- Receive clearance through an updated background check
- Complete a satisfactory tuberculosis (*TB*) test
- Receive satisfactory portfolio assessment by faculty
- Receive satisfactory rating on Benchmark II Student Interview
- Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: **www.uwstout.edu/soe/students/requirements-benchI.shtml**.

- Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- Complete all program coursework
- Meet all program-specific requirements
- Student teach at two levels: Middle School and High School.
- Receive a satisfactory student teaching assessment

Program Requirements

General Education

41 credits required

A. Communication Skills — 8 Credits

ENGL-101 Freshman English – Composition or
ENGL-111 Freshman English – Honors I 3
ENGL-102 Freshman English – Reading/Related Writing or
ENGL-112 Freshman English – Honors II 3
SPCOM-100 Fundamentals of Speech 2

B. Analytic Reasoning — 7 Credits

MATH-153 Calculus I 4
STAT-320 Statistical Methods 3

C. Health and Physical Education — 2 Credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts — 9 Credits

HIST-210 Modern World 3
LIT-XXX Any Literature 3
XXX-XXX Any Creative/Performing Arts 1-3
XXX-XXX Other Humanities and Fine Arts 0-2

E. Social and Behavioral Sciences — 9 Credits

POLS-210 American Government 3
PSYC-110 General Psychology 3

Remaining course must be from areas of anthropology, economics, geography, or sociology.

F. Natural Sciences (with Lab) — 4 Credits

BIO-111 Science, Society and the Environment 4

G. Technology — 2 Credits

Major Studies

79–89 credits required

Professional Education — 13 Credits

EDUC-303* Educational Psychology 3
EDUC-326* Foundations of Education 2
EDUC-336* Multiculturalism: Issues and Perspectives 2
EDUC-376* Field Experience – Cross Cultural Experience 1
EDUC-382* Secondary Reading and Language Development 2
SPED-430* Inclusion of Students with Exceptional Needs 3

Science, Technology and Mathematics Education — 30 Credits

STMED-101 Introduction to Math and Science Education 2
STMED-1XX Pre-Student Teaching 1
STMED-260 Curriculum, Methods, and Assessment for Science and Technology 3
STMED-3XX Pre-Student Teaching 1
STMED-390 Laboratory and Classroom Management in Science and Technology 3
STMED-XXX Curriculum, Methods and Assessment for Science and Technology II 3
STMED-401 Capstone: Math and Science Education 1

Select 16 credits of student teaching or teaching internship from the following:

SCIED-409 Broadfield Science Student Teaching 4-16
SCIED-410 Biology Student Teaching 4-16
SCIED-411 Chemistry Student Teaching 4-16
SCIED-412 Physics Student Teaching 4-16
SCIED-413 Broadfield Science Teaching Internship 4-16
SCIED-414 Biology Teaching Internship 4-16
SCIED-415 Chemistry Teaching Internship 4-16
SCIED-416 Physics Teaching Internship 4-16

Science Courses — 36-46 Credits

*Students must complete a least one **major** science certification and one different **minor** science certification.*

Broadfield Science Major Certification

BIO-135* Organismal Biology 4
CHEM-135* College Chemistry I 5
CHEM-136 College Chemistry II 5
PHYS-241* College Physics I 5
PHYS-242 College Physics II 5
PHYS-255 Meteorology 2
PHYS-258 Introduction to Geology 2

Biology Major Certification

BIO-135* Organismal Biology 4
BIO-136 College Molecular Cell Biology I 5

Additional 19 credits of biology above the introductory level.

Chemistry Major Certification

CHEM-135* College Chemistry I 5
CHEM-136 College Chemistry II 5

Additional 18 credits of chemistry above the introductory level.

Physics Major Certification

PHYS-241*	College Physics I	5
PHYS-242	College Physics II	5

Additional 18 credits of physics above the introductory level.

Biology Minor Certification

BIO-135*	Organismal Biology	4
BIO-136	College Molecular Cell Biology I	5

Additional 9 credits of biology above the introductory level.

Chemistry Minor Certification

CHEM-135*	College Chemistry I	5
CHEM-136	College Chemistry II	5

Additional 8 credits of chemistry above the introductory level.

Physics Minor Certification

PHYS-241*	College Physics I	5
PHYS-242	College Physics II	5

Additional 8 credits of physics above the introductory level.

** Student must earn a "C" or better in all professional education and introductory science courses.*